

Jordan/Malheur Field Office
100 Oregon Street
Vale, Oregon 97918

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BLM
Vale District

Succor Creek District Improvement Company Ditch Right-of-way (ROW) Amendment

Environmental Assessment Number DOI-BLM-OR-V040-2011-001



As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

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1 INTRODUCTION

Background Information

The Jordan/Malheur Field Office (JMFO) within Vale District Bureau of Land Management (BLM) was provided with an application from Succor Creek District Improvement Co. (SCDIC) to amend a ditch right-of-way (OR-23731) established in 1980. The applicant requests to amend the right-of-way (ROW) by converting portions of the ditch to a pipeline and modifying the route ½ mile to the west. The objective of the applicant is to increase water flow and to reduce the amount of water lost in the current ditch. The new pipeline would transport water from the Texas Basin reservoir to farmland for irrigation.

1.1 Location

The location of the proposed ROW amendment is approximately 2 ½ miles east of Rockville, Oregon in Malheur County, Oregon (T. 26S., R. 46E., N ½ of Section 11) on BLM administered land (see Map 2). The planning area is composed of somewhat flat terrain south of the Dry Creek and McBride Creek drainages. The elevation is approximately 3800 ft. The long term average annual precipitation is between ten and fourteen inches. Precipitation occurs primarily as snow fall during the winter and spring rains, with occasional mid-summer thunderstorms.

1.2 Purpose and Need for Action

BLM Purpose and Need

The purpose of the action is to provide Succor Creek District Improvement Company an opportunity to amend right-of-way OR-23731 by modifying design and location of portions of the current ditch right-of-way to a buried pipeline. This action would include access and site development outside the current right-of-way easement.

The need of the action is established by Bureau of Land Management's responsibility under FLPMA to respond to a request for a right-of-way grant amendment.

1.3 Decision to be Made

As mentioned in the Purpose and Need for Action the BLM has a responsibility under the Federal Land Policy and Management Act (FLPMA) and its implementing regulations, to respond to ROW applications. The BLM is also required to comply with the National Environmental Policy Act (NEPA) and the Council of Environmental Quality (CEQ) regulations. The BLM's Jordan/Malheur Field Office has determined that an Environmental Assessment (EA) is necessary to evaluate and disclose the potential environmental impacts associated with this proposed action and any reasonable alternatives to the proposed action, including a no action alternative.

The decision to be made by the authorized officer is to determine whether or not to choose the proposed action and grant a ROW based on the highest and best use of the public land or reject the proposal (No Action Alternative) based on scoping issues identified in the NEPA process.

1.4 Conformance

The BLM's Jordan/Malheur Field Office has determined that an Environmental Assessment (EA) would be needed to evaluate and disclose the potential environmental impacts associated with this proposed action and any reasonable alternatives to the proposed action, including a no action alternative. The EA has been prepared in accordance with the following statutes and implementing regulations:

- The National Environmental Policy Act (NEPA) of 1969, as amended (Public Law [PL] 91-190, 42 U.S.C. 4321 (et seq.);
- 40 CFR 1500 (et seq.). Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act;
- USDI requirements (Departmental Manual 516, Environmental Quality [USDI 2004]);
- Title V of the Federal Land Policy Management Act of October 21, 1976, (90 Stat. 2776; 43 U.S.C. 1761), and the regulations found at 43 CFR 2800 (FLPMA 1976).
- BLM NEPA Handbook (H-1790 1), as updated (BLM January, 2008);
- Considering Cumulative Effects under the NEPA [CEQ 1997];
- Proposed Southeastern Oregon Resource Management Plan and Final Environmental Impact Statement (BLM, 2001) (SEORMP FEIS).

All actions approved or authorized by the BLM must conform to the existing land use plan where one exists (43 CFR 1610.5-3, 516 DM 11.5). Although it is not a National Environmental Policy Act (NEPA) requirement, the BLM includes within all its NEPA documents a statement about the conformance of the proposed action and alternatives with the existing land use plan. The BLM's planning regulations state that the term "conformity" or "conformance" means that "... a resource management action shall be specifically provided for in the plan, or if not specifically mentioned, shall be clearly consistent with the terms, conditions, and decisions of the approved plan or amendment" (43 CFR 1601.0-5(b)).

1.5 Scoping and Public Involvement

This EA was prepared in accordance with the Title V of FLPMA, the CEQ regulations for implementing NEPA (40 CFR 1500), and the BLM's NEPA Handbook (H-1790-1, January 2008). The scope of this EA is based on issues and concerns identified by the BLM staff and the applicant. The scoping process was used to identify possible resource issues which are identified in Table 1. Internal scoping within the agency generated the following resource concerns.

- How will abandonment of the ditch affect wildlife?
- How much of the ditch will be abandoned?
 - Applicant commented that he will use ditch to route water.
- What impact will the short term and long term impacts affect the spread of noxious and invasive weeds? What weeds are present?
- Will the impacts affect sensitive plants? Are there plants?
- Will the project cause an increase in erosion long and short term?

Those resources found in Table 1 marked as "not present" are not present within or adjacent to the ROW. Those elements or resources marked as "present not affected" may be present within

or adjacent to the ROW but would not be impacted by the proposed action. Those elements or resources marked as “present affected” may be found within or are adjacent to the ROW and may be subject to direct, indirect and cumulative effects. Only those elements marked as present and affected are analyzed within the Environmental Effects section of this environmental assessment.

Table 1 Critical Elements and Issues generated by Internal and External Scoping

Element or Resource	Not Present	Present Not Affected	Present Affected	Issue
Air Quality		X		
Area of Critical Environmental Concern (ACEC)	X			No designated, proposed or identified ACEC.
Land & Realty			X	
Livestock Grazing		X		Not Affected
Prehistoric and Historic Cultural Resources	X			Survey complete
Recreational Activity		X		
Soils & Watershed Resources			X	
Special Status Plants	X			Survey complete
Vegetation Resources			X	Weed spread from soil disturbance
Visual Effects (VRM)		X		
Wildlife Resources			X	What are the potential impacts to wildlife associated with upland sagebrush steppe environment?
Wilderness Resources	X			No designated, proposed or identified wilderness.

2 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

This section of the EA describes the Proposed Action and alternatives, including any that were considered but eliminated from detailed analysis. Two alternatives are considered in detail:

2.1 Alternative 1: No Action

Under Alternative 1, BLM would not grant an amendment to the existing right-of-way. The ditch would remain in its current condition and would be managed under the terms and conditions of the current right-of-way grant.

2.2 Alternative 2: Modify route and replace portions of Right-of-way with pipeline (Proposed Action)

The proposed action is for the BLM to grant a ROW amendment and allow the Succor Creek District Improvement Company to move portions of the route approximately ½ mile to the west

of the existing easement and to place an 18 inch buried pipeline along 0.65 miles of the ditch right-of-way (OR-23731). The width of the amended ROW will remain as 100 feet. Heavy equipment will be used for trenching and reclaiming portions of the old ditch. Equipment and material will be staged on adjacent private land to minimize impacts to public land. This action will take place when soil moisture is low to minimize impacts (Fall 2013). Periodic maintenance will be required to keep the pipeline in a usable condition.

2.3 Alternatives Considered but not Analyzed in Detail

1. Replace this portion of ditch with pipeline in the same location as the ditch.

Placing a pipeline within the same location of the current ditch would increase material and labor costs. This alternative, because of the slope, would require clean out cement catchments every 200-400 yards in order to reduce sediment built up because of the low slope. This alternative was considered in the original right-of-way Environmental Assessment and was considered to be cost prohibitive.

2. Relocate proposed pipeline to private land exclusively.

This alternative was considered in the field; however the gradient is not sufficient to allow proper flow.

2.4 Design Feature

Restate objectives of applicant:

The objective of the applicant is to increase water flow and to reduce the amount of water lost in the current ditch. The new pipeline would transport water from the Texas Basin reservoir to farmland for irrigation.

Pipeline features

- Pipe length-3300 feet or 0.63 miles
- GPM-2000
- Elevation change-4 feet
- Pipeline depth-20 inches
- Pipe size/type-18 inch PVC
- Thickness-0.366 inch
- PSI-80
- Dynamic head
- Static head
- Surge protection
- Friction loss
- Aluminum Air Vent-3 inch poly pipe; 4 inches tall and 3 inches wide
- Air relief valve
- Standard Dimension Ratio (SDR)-51

Construction details

Construction will be completed by Rain for Rent Engineering Company.

Equipment used will include an excavator, forklift, and skid steer. The staging area for equipment and material will be on private ground.

Winterizing if needed

Stipulations for ROW Amendment

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter describes the affected environment and is followed by environmental consequences by alternatives to illustrate the differences between the proposed action and the “no action” alternative. This chapter identifies the direct and indirect impacts associated with the proposed right-of-way; their relative severity and duration and the design features to minimize these impacts.

3.1 Rangeland Vegetation/Noxious Weeds

Vegetation

The entire route of the proposed right-of-way amendment crosses a crested wheatgrass seeding (North Rockville Seeding). Natural vegetation consists mainly of Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*), cheatgrass (*Bromus tectorum*), bluebunch wheatgrass (*Pseudoroegneria spicata*), Sandburg bluegrass (*Poa secunda*), with some rabbitbrush (*Ericameria nauseosa*), Great Basin wild rye (*Leymus cinereus*) and low rabbitbrush (*Chrysothamnus viscidiflorus*). Most of these plants are found along the slopes and ridges or drainages unsuitable for seeding.

Note: site visit-scotch thistle, Canada thistle, bull thistle along the ditch; permittee also mentioned knapweed and salt cedar

Noxious Weeds

A variety of noxious weeds of varying significance are scattered throughout Succor Creek Ditch project area. Much of the designated piprlinr ROW is disturbed to a degree from its close proximity to agricultural land and a nearby ranch. Native perennials are intermixed with annual/winter-annual grasses including cheatgrass/downy brome (*Bromus tectorum*). Various annual mustards, including clasping pepperweed (*Lepidium perfoliatum*) and *Sisymbrium* ssp., are scattered throughout the area, as are other annuals including Russian thistle (*Salsola iberica*), kochia (*Kochia scoparia*), redstem fillaree (*Erodium cicutarium*), and lambsquarter (*Chenopodium* ssp.). Scotch thistle (*Onopordum acanthium*) and bull thistle (*Cirsium vulgare*), both biennials, and Canada thistle (*Cirsium arvense*), a perennial, are found intermittently along the ditch.

Several noxious weeds are found in isolated patches within a 10-mile radius of the area, including the perennials whitetop or hoary cress (*Lepidium ssp.*), perennial pepperweed (*Lepidium latifolium*), Russian knapweed (*Acroptilon repens*) and saltcedar (*Tamarix ramosissima*).

Any of these weeds could establish in the disturbed area along the existing ditch and proposed pipeline, as they are easily moved around by various means including vehicles, wind, water, all human activities, livestock and wildlife.

Table 2: Oregon Department of Ag Noxious Weed Policy and Classification System can be found at: http://egov.oregon.gov/ODA/PLANT/weed_index.shtml. County classification may be found at: <http://www.malheurco.org/weeds>.

Weed Species: Scientific Name	Weed Species: Common Name	ODA Classification	County Classification	Not Classified
<i>Bromus tectorum</i>	Cheatgrass		C	
<i>Lepidium perfoliatum</i>	Clasping pepperweed			X
<i>Sysymbrium altissimum</i>	Tumble mustard			X
<i>Chorispora tenella</i>	Blue mustard			X
<i>Chenopodium sp.</i>	Lambsquarter			X
<i>Kochia scoparia</i>	Kochia		C	
<i>Salsola iberica</i>	Russian thistle			X
<i>Erodium cicutarium</i>	Redstem fillaree			X
<i>Cirsium arvense</i>	Canada thistle	B	B	
<i>Onopordum acanthium</i>	Scotch thistle	B	B	
<i>Cirsium vulgare</i>	Bull thistle	B	C	
<i>Lepidium latifolium</i>	Perennial pepperweed	B	B	
<i>Tamarix ramosissima</i>	Saltcedar	B	C	
<i>Lepidium sp</i> (<i>Cardaria</i>)	Whitetop species	B	B	

3.1.1 Alternative 1 (No Action)

Under the No Action Alternative, quantity of noxious weeds and treatment would remain in its current condition.

3.1.2 Alternative 2 (Proposed Action)

The soil disturbing activity under the proposed action to construct the proposed pipeline would likely create new niches for possible weed invasion.

The proposed action would directly impact approximately 3.0 acres of existing vegetation. The impacts would be due to trenching, placement of pipe, filling and reclamation disturbances

associated with the pipeline construction. Reseeding of the disturbed area with a BLM approved seed mix would minimize long-term impacts.

3.2 Soils/Watershed Resources

Soils

No soil survey data is available through the Natural Resource Conservation Service (NRCS); however, soil data is available from the BLM through a fourth order soil survey. The soils found in the area of the proposed project were surveyed and described in Oregon's Long Range Requirements for Water 1969, Appendix I-11, Owyhee Drainage Basin. Major soils found in the area are listed below.

The area has Unit 60 soils which are moderately fine textured, well drained soils underlain by old lacustrine sediments. They occur on gently sloping to hilly uplands mainly in conjunction with Unit 98 soils. This soil has a high potential for range seeding. Unit 60 soils occur on 20 to >60% slopes. The major limiting factor for these soil types is slope. Moderate to slow permeability and rapid runoff lead to a possibility of high erosion hazard.

Unit 1 soils consist of deep, well-drained, medium-textured soils derived from recent alluvium on nearly level fans and bottomlands.

The proposed project is on gently sloping terrain with the majority of it occurring on Unit 60 type soils. A small portion occurs on Unit 1 type soils at the northern extent of the project as it returns to private property.

Watershed Resources

The project area is located in the Middle Snake-Succor Hydrologic Subbasin, 4th-field HUC number 17050103. The watershed encompasses approximately 1,480,560 acres and 3,434 stream miles.¹

The proposed action is located on gently rolling terrain. There are no surface waters, wetlands, or riparian zones located within the proposed ROW on public lands. The stream channels in the proposed project area are McBride Creek and Dry Creek both intermittent channels. McBride and Dry Creek converge and then flow into Succor Creek approximately 1 mile northwest of the proposed ROW on private land. The nearest perennial stream is Succor Creek located approximately 0.6 miles west of the proposed ROW also on private land.

3.2.1 Alternative 1 (No Action)

Under the No Action Alternative, impacts to the Soil and Watershed Resources are those that currently exist.

3.2.2 Alternative 2 (Proposed Action)

Disturbed soils would be subject to increased wind and water erosion during construction activity within the ROW and would result in effects such as soil displacement, erosion, loss of moisture holding capacity, loss of microbiotic soil forming processes and increased runoff

¹ SEORMP FEIS, 2001, Table 2-9, pg. 55 and Map HYDR-3M

potential. Soil productivity and soil forming processes along the 0.65 miles would be altered until the disturbed areas are reclaimed and re-vegetated. Design features of the proposed action and associated construction activity are consistent with Appendix O – Best Management Practices of the SEORMP FEIS. Construction activity within the ROW would result in some increased runoff, sediment transport, and potential water quality impacts over the short-term until the site has been stabilized or reclaimed. Keeping construction activities to dry soil conditions will also minimize soil disturbance and overall impacts to water quality in the Succor Creek drainage.

3.3 Cultural Resources

A cultural resources inventory was conducted by the Vale District archeologist, who found no cultural resources in the project area. Known sites that occur in the vicinity include the old Rockville townsite in Section 16 and a quarry site in section 8.

3.3.1 Alternative 1 (No Action)

Under the No Action alternative, there would be no affect to cultural or paleontological resources which may be present in the area because there would be no new ground surface disturbing construction activities.

3.3.2 Alternative 2 (Proposed Action)

Under Alternative 2, if cultural and paleontological resources are present, they will be avoided. If avoidance is not possible, then mitigation measures will be implemented.

3.4 Wildlife and Wildlife Habitat

Big game species inhabiting the area are mule deer and pronghorn antelope. Other mammals include coyotes, rabbits, and a variety of rodents, including ground squirrels, mice and pocket gophers. Numerous species of birds inhabit the subject lands, including passerines and a variety of upland game birds such as quail, chukars, pheasants and mourning doves. There are also some raptors. Reptiles and amphibians such as rattlesnakes, gopher snakes, lizards, frogs, and toads are also found in the area. Trout occasionally occur in Succor Creek, but the majority of fish are either suckers or dace. Fish, particularly trout are limited by the low flows and high water temperature of late summer.

There are no known threatened, endangered or sensitive animals in the project area.

Sage-grouse

The project area is located within a 3211 acre crested wheatgrass seeding known as the Rockville Seeding which was drill seeded as part of the Vale Project in 1964. Crested wheatgrass dominates the project area with 0-5% sagebrush and rabbitbrush cover and a low diversity of forbs and additional grasses (burr buttercup, cheatgrass, etc.). The site also includes unseeded benches with sagebrush cover ranging from 5-25%. The project area is classified as Class 2 (C) in the BLM Technical Manual 417 (2005) which states:

Class 2 (C): Plant communities that are dominated by seedings of crested wheatgrass or other exotic perennial grasses, where sagebrush species are in the early stages of

recolonization. These plant communities might not be providing the complex shrub-grass-forb cover and food needs of sage-grouse and other wildlife that use sagebrush-steppe habitat, but if there is active recolonization of sagebrush species, there is high future likelihood for providing habitat needs. These plant communities are desirable to sustain if they are moving successional to greater abundance of sagebrush species.

The project area is within Habitat Category 2 and is potentially used by sage-grouse for winter habitat, brood rearing and nesting. The closest known lek sites are approximately six miles to the south and five miles to the west. The proposed project is located in T26S, R46 E, Sec.11, which the north half of section 11 is Preliminary General Habitat (PGH) and the south half of section 11 is Preliminary Priority Habitat (PPH) for Sage Grouse habitat designation.

The proposed right-of-way is 100 feet by 1,153 feet or 2.6 acres. It is expected that 0.26 acres or a 10 foot wide path will actually be disturbed during the construction process. This expected impact is 0.008% of the entire seeding. This activity would potentially kill several sagebrush plants, but have limited impacts to the community as a whole. As a mitigation measure BLM would like to salvage the sagebrush and collect the seeds when the sagebrush is removed. Therefore, we would like to be notified if work begins. If this proposed project is abandoned then wildlife will still have access to water at Succor Creek and McBride Creek. As a result, no further analysis of potential impacts to wildlife from actions considered will be completed.

In order to mitigate potential impacts to sage-grouse construction and maintenance will be done outside of the period from March 1 to June 30.

4 ISSUES, ELEMENTS OR RESOURCES CONSIDERED BUT DETERMINED NOT TO BE AFFECTED

The following resources were discussed during the scoping process and have been identified as either not present or not significantly impacted by the proposed action considering the scope of the project and therefore will not be analyzed.

4.1 Socio-economic Values

A rural lifestyle is characteristic of the region with agriculture as the basis for the economy. The primary use of the land and the major component of the agricultural industry is livestock grazing. This is particularly true on public lands, which comprise much of the surface ownership in the vicinity (Map 3). Nearly all of the private land is located in the bottomlands along Succor Creek, Dry Creek and McBride Creek. Private lands are used principally for pasture and hay production. The current ditch is specifically designed to contribute to the local economy by providing water for irrigated croplands and incidentally for livestock. The area is also used for some casual outdoor recreation.

The county zoning classification is F-1, exclusive farm use. The proposed action conforms to county planning and does not conflict with local, state or federal regulations.

4.2 Visual Resources

The route of the right-of-way amendment is located in the Owyhee Upland physiographic region. The characteristic landscape is designated as foothills area, in which grey-green sagebrush and light green to golden tan grasses predominate as an even pattern on the landscape. Isolated poplar trees at ranches or by-gone homesteads add interest. Many small drainages are visible with numerous, but scattered rock outcrops. The seedings lend to the uniformity of the landscape, and form definite, even lines where they border sagebrush slopes. Round rolling hills and gentle grassy slopes cover the area. The pipeline will follow a gentle downward slope at about 3800 feet.

FLPMA requires the BLM to consider the effects of management actions on the visual quality of the landscape. To protect visual resources, all public land is inventoried to determine its visual resource management (VRM) classification. The VRM in the project area is designated as class IV which states the following objectives found in SEORMP:

The objective of Class IV is to provide for management activities that require major modification of the landscape. These management activities may dominate the view and become the focus of viewer attention. However, every effort should be made to minimize the impact of these projects by carefully locating activities, minimizing disturbance, and designing the project to conform to the characteristic landscape.

4.3 Land & Realty

All of the public lands in the vicinity of the proposed ditch are used for livestock grazing; most of the federal land is part of a crested wheatgrass seeding. The bottomlands surrounding Succor Creek are primarily privately owned and are mostly used as farmland for hay and pasture. Additional uses of the land include wildlife habitat, right-of-ways for telephone and power lines, a water pipeline and troughs, and the county road. There may be some casual outdoor recreation, mostly in the form of hunting and incidental mineral collecting. There is no prime and unique farmland along the right-of-way.

4.4 Area of Critical Concern (ACEC)

There are no designated, proposed or identified ACECs within or directly adjacent to the project area. As a result, no further analysis of potential impacts to ACECs from actions considered will be completed.

4.5 Climate Change/Air Quality

A growing number of scientific analyses indicate, but cannot prove, that rising levels of greenhouse gases in the atmosphere are contributing to climate change. In the coming decades, scientists anticipate that as atmospheric concentrations of greenhouse gases continue to rise, average global temperatures and sea levels will continue to rise as a result and precipitation patterns will change (Intergovernmental Panel on Climate Change, 2007). A conclusion can be reached that changes in resource impacts as a result of climate change would be highly sensitive to specific changes in the amount and timing of precipitation, but specific changes in the amount and timing of precipitation are too uncertain to predict at this time. Because of this uncertainty about changes in precipitation, it is not possible to predict changes in vegetation types and condition, wildfire frequency and intensity, streamflow, and wildlife habitat.

The additional contribution of greenhouse gasses to the atmosphere as a result of implementing the proposed action when compared to the No Action alternative is limited to that contribution from fossil fuel consumption by the equipment accessing the site, a few days of heavy equipment activity and emissions from landing and takeoff from the aircraft. When compared to greenhouse gas emissions on a world-wide, national, regional, or local scale, and when compared to the contributions from other sources of greenhouse gasses, the potential impacts from the proposed actions are inconsequential. As a result, no further analysis of climate, climate change, or air quality will be completed.

Total annual precipitation averages about 11 inches, most of which is received during the winter months as snow, with a brief wet period during spring rains. There are occasional thundershowers during the summer, but they are brief and poorly timed for much benefit to plants. July and August are the driest months. The dry conditions of the summer are accentuated by moderate winds, which further limit the effectiveness of available moisture. Temperatures typically range from summer highs of 100° F to winter lows below zero. Wind intensity and prevailing direction are determined by the surrounding terrain. Major storm movements generally come from the southwest. Air quality is generally high.

4.6 Geology/Mineral Resources

The subject lands lie in the Owhyee Uplands geologic province, which is characterized by thick sequences of Tertiary volcanic and non-marine sedimentary rocks. There are moderately well indurated, light-colored, lacustrine and fluvial deposits of tuff, pumicite, palagonite tuffs, and lesser amounts of siltstone, arkosic sandstone, and pebble and cobble conglomerate. Some lignitic beds are found locally, and silicic vitroclastic debris commonly crystallized and altered to secondary silica minerals, alkali feldspar, zeolites, and clay materials. The area may contain some welded and nonwelded ash-flow tuffs and minor rhyolite flows. This formation also contains widespread, abundant vertebrate and minor plant fossils. The area is also prospectively valuable for oil and gas.

4.7 Livestock Grazing

The planning area is within the Rockville Seeding North pasture of the Rockville Allotment. Grazing by cattle is authorized from April through October. The proposed action will not affect the current AUM allocation and will not displace or disturb the cattle in a substantial way. As a result, no further analysis of potential impacts to livestock grazing from actions considered will be completed.

4.8 Prehistoric and Historic Cultural Resources

Pre-European contact Native American peoples were extremely well adapted to their environment. The subsistence economy was strongly oriented toward gathering and collecting because plant foods were more abundant and dependable than fowl, fish or mammals. Mammals provided skins, furs, tools and many other by-products of aesthetic and practical value. Insects were often eaten. Beetles, grasshoppers, locusts, crickets, ants and caterpillars were consumed, as well as most eggs and larva. Historic documents indicate that several hundred plants were used by the Indians of the Great Basin for medicinal purposes, fiber sources and food. The Native people of the Great Basin, who practiced the ancestral lifeways into the 19th century,

were heirs to an extremely ancient cultural tradition with a technology both effective and efficient, with many multi-functional, light-weight and expendable tools. The area along the Owyhee River provided camping areas throughout the winter and spring months as well as allowing access to higher elevations during the summer. The diverse habitat provided a wide variety of plant and animal resources that were utilized by Native Americans.

Exploration into this area during the Historic period began with the expeditions of John Jacob Aster, after he heard the stories from the Lewis and Clark Expedition of 1804-1806. The first written observations of southeastern Oregon can be found in journals kept by men involved in the expansion of fur trapping territory. Trapping occurred along the major and minor tributaries in the area: Owyhee, Snake, Malheur, North Fork Malheur and South Fork Malheur Rivers. The era of the fur trade provided the basis for American families to travel west. For Native Americans, increased use of the Oregon Trail burdened grazing resources, killed off game, and displaced resident bands. As Native Americans were moved to Reservations, homesteads replaced the Native American winter camps along the Owyhee River. Water wheels were constructed to move water from the river to homesteads, cultivated fields and orchards. The main access route was up the Owyhee River along the floodplain, a road now inundated by Owyhee Reservoir. Maps from 1924 show three waterwheels, two cabins and one house located along the Owyhee River.

Surveys for cultural resource have been conducted adjacent to this project location where surface disturbing projects have been proposed. Within a five mile radius of this project, seven surveys have been conducted covering 738 acres.

Prehistoric or pre-contact cultural resources include lithic scatters, rock shelters, pithouses, petroglyphs, pictographs, hearths and rock features (cairn, alignments). Historic cultural resources include buildings and building ruins, mine sites, wagon roads, railroad grades, irrigation ditches and associated structures, dams and archaeological deposits. American Indian traditional use areas are a special category of cultural resources. Some cultural resources may be less than 50 years old but have cultural and religious importance to American Indian tribes or paramount historic interest to the public. Heritage resources may be eligible for the National Register of Historic Places at the local, regional, or national level. Sites known to be present in the area reflect the diverse prehistoric and historic use of the area along and adjacent to Succor Creek.

Paleontological Resources

Fossil floral and faunal resources are located in areas where sedimentary deposits are present. Silts and sandstones deposited under water in slow moving rivers or stagnant lakes often contain fossil deposits. Shales derived from mudflows deposited by rivers may contain organic material as well as fossils. Limestone deposits may contain fossils ranging from microscopic flora and fauna to larger sea creatures. Across the Vale District, a wide variety of fossil resources have been located.

Pioneering work in the field of paleontology was conducted by A.J. Shotwell in the late 1950s and early 1960s. During several field seasons, a field crew from the Museum of Natural History, University of Oregon studied Miocene, Pliocene and Late Tertiary mammals. Fossil localities are

noted for diversity and abundance bearing both small rodent specimens as well as large specimens such as camel, horse, turtle and sloth. Later species such as mammoth, mastodon and bison are present with Vale District as well. Diatomaceous sediments are present at several locations in quality and quantity sufficient to support active mining operations.

A review of the district files found that one fossil locality has been documented north of and within five miles of the proposed project location. A field survey concluded that no resources would be affected by the proposed action. As a result, no further analysis of potential impacts to Prehistoric and Historic Cultural Resources from actions considered will be completed.

4.9 Special Status Plants

A pre-field review of the project area showed no known populations of federally threatened or endangered or Bureau Sensitive plant species within the project area. The nearest plant taxa of concern, *Astragalus cusickii* var. *sterilis*, *Mentzellia mollis*, and *Stanleya confertiflora*, all Bureau Sensitive species, occur approximately 0.8, 0.9, and 1.4 miles from the project area. A survey of the project area was conducted on May 9, 2011, by BLM botanist Gillian Wigglesworth. No federally listed or Bureau Sensitive plant species were observed along the pipeline during this survey. This project would have no effect on federally listed or Bureau Sensitive plant species because they are not located in the project area.

4.10 Wilderness Character and Wilderness Study Area (WSAs)

Lands within Vale District were inventoried for wilderness values between 1978 and 1981, in accordance with the Federal Land Policy and Management Act of 1976. The inventory resulted in the designation of some lands as Wilderness Study Areas (WSA). Only subsequent legislation can designate these or other public lands as Wilderness Areas.

No Wilderness Study Areas or Wilderness Areas are within the boundary of the planning area of the proposed action. No further analysis of potential impacts to Wilderness or WSAs from actions considered will be completed.

5 Cumulative Impacts

Present Actions (Common to All Alternatives)

Within the geographic scope of this analysis, no known actions (by BLM or other parties) were in progress at the time this EA was written. No known actions would be occurring during the period of this proposed action. For this reason, there are no effects from present actions that would have a cumulative relationship with the effects of this proposed action.

Future Actions (Common to All Alternatives)

Future BLM grazing permit renewal actions could also conceivably include some additional rangeland development proposals. No proposals are identified at this time and prior to any such construction additional NEPA analysis considering the merits of the proposals would be completed.

6 Mitigating Measures

None required.

7 Irreversible or Irretrievable Commitment of Resources

There are no irreversible or irretrievable commitments of resources associated with the proposed action. If it becomes necessary, all of the permanent project developments proposed could easily be removed and their impact areas could be substantially restored to conditions that existed prior to development.

8 List of Preparers

Thomas (Pat) Ryan	Field Manager, Jordan/Malheur Field Office
Garry Brown	Rangeland Management Specialist
Brent Grasty	Planning and Environmental Coordinator
Kari Points	Outdoor Recreation Planner, Wilderness
Susan Fritts	Natural Resource Specialist - Botanist
Diane Pritchard	Archaeologist
Lynne Silva	Range Technician, Weeds
Todd Allai	Riparian Specialist
Trisha Skerjanec	Realty Specialist
Shannon Wolery	Word processing, internet posting, administrative record

9 List of Agencies, Organizations, and Persons Notified

Succor Creek District Improvement Company
Adjacent permittees
Oregon State Parks and Recreation
USFW
Oregon State Fish and Wildlife

10 Literature Cited

USDI BLM 1979. Northern Malheur Management Framework Plan (MFP) concurrence by Vale District Manager. Internal BLM planning document.

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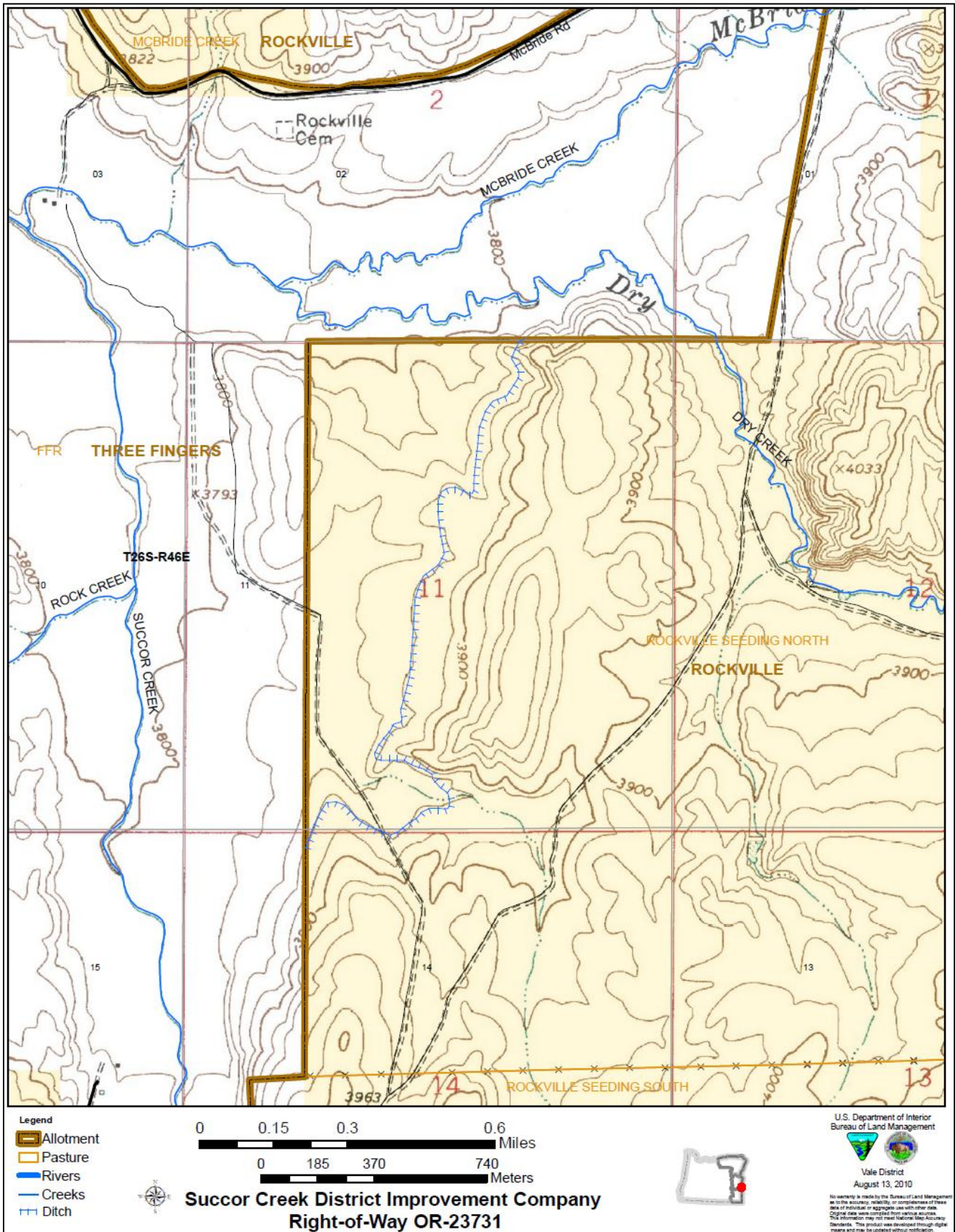
11 Maps 1, 2 and 3

See next pages

Map. 1



Map. 2

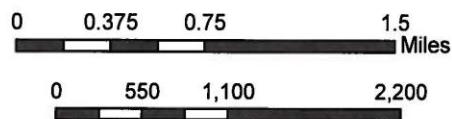


Map. 3



Legend

County route	Bureau of Reclamation
Bureau of Land Management	Bureau of Indian Affairs
Bureau of Land Management	Private
State Agency	



U.S. Department of Interior
Bureau of Land Management

Vale District
September 2013

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OR-23731 Succor Creek District Improvement Co.